



SISTEMA ESPAÑOL DE AUTOCONTROL DE ZUMOS Y NÉCTARES

## 2022's activities of the **Spanish** and **European** Self-Control System of Juices and Nectars



16 MARCH 2023



# NATIONAL CAMPAIGN 2022

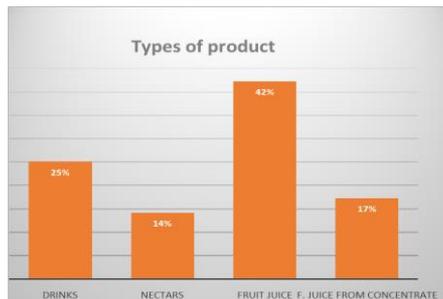
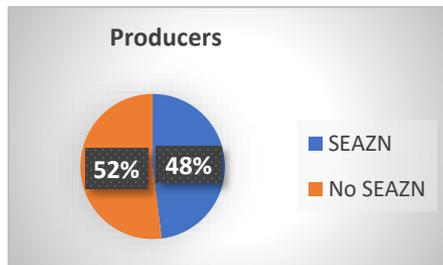
## Members



2022: Around 20 producers assessed

## Sampling Scope

- ✓ 9 Manufacture plant inspections (AZTI)
- ✓ Sampling :
  - ✓ 43 muestras de planta (Senior technician AZTI).
  - ✓ 45 market samples (Senior technician at CNTA).
  - ✓ 88 samples in total.



## Analysis Scope

63 samples analysed (CNTA y Eurofins)  
8 follow-up samples

- ✓ Product name. RD. 781/2013; Reg. 1169/2011.
- ✓ List of ingredients. RD. 781/2013; Reg. 1169/2011.
- ✓ Nutrition and health claims. Reg. 1924/2006 and Reg. 432/2012.
- ✓ "Gluten free" statement. Rto. 828/2014.
- ✓ Voluntary claims. Artículo 7 Rto. 1169/2011.
- ✓ Conformidad composición – etiquetado nutricional

	Type of product
<b>Sugars and sorbitol</b> (and related calculations)	All type of fruits, peach, pear,
<b>Anions and cations</b> (Ca, Mg, P, K, Na, sulfate, nitrate)	All type of fruits
<b>Organic acids</b> (and related calculations)	All type of fruits
Absolute quality requirements (Rel. Density 20/20, refracometric Brix)	All type of fruits
<b>Contaminants</b> (Patulin, ochratoxin, ethanol, sulphur dioxide (IFU 7a-IC:2018; IC-PAD)	Grape, apple, all type o fruits
<b>Sugar addition</b> (isomaltose, maltose, invert sugar, inulin)	Only in juices
<b>Aminoacid-related components</b> (formol index, proline index)	All type of fruits, orange, mandarin
<b>Soluble pectins and Pulp</b>	Orange, mandarin, pineapple
<b>Vitamins</b> (L-ascorbic acid, vitamin E, provitamin A, vitamin A, vitamin C, vitamin D)	Orange, mandarin, nectars, nutrition declaration
<b>Anthocyanin fingerprint</b>	Red fruits (grape, pomegranate, others red)

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## Analytical Overview

Isolated parameters out of range of AIJN Guideline:

- High pectin concentration (2; Orange nectar/drink)
- Low D-isocitric acid (pineapple nectar).

Low concentration of added vitamins (C, E, A) in several flavours and producers (5).

Grape juice from organic agricultura (2): high SO<sub>2</sub>



Coconut water:

- Very deviated profile (1)
- High maltose and/or isomaltose (2 out of 5).



Pomegranate juice:

- Very deviated profile (1)
- Low density (1)
- High sodium (1)



Capsule for coffee machine (orange flavour): very deviated profile.

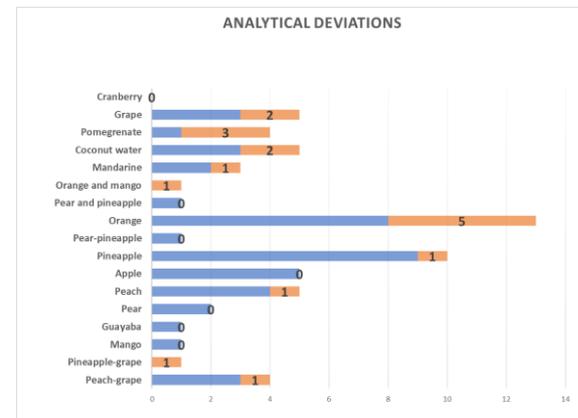


3 juice samples (different flavours) from the same producer: very deviated profile.

Mandarin juice (1): very deviated profile.

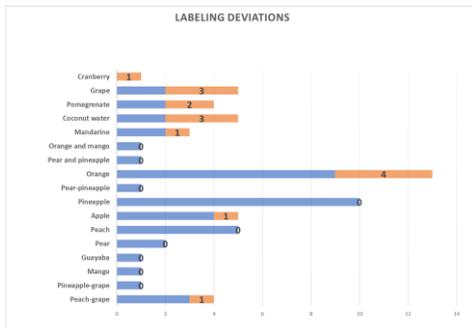


## 70 % samples correct



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## 75 % samples correct



## Labelling Overview

### Misleading information (Art. 7; Reg. 1169/2011):

- “100% Fruit juice, nothing else” (1)
- “No added sugars. It contains sugars naturally present in the fruit” (7)
- No preservatives and no colours (1)
- Without gluten (1)
- Gluten free factory (1)
- 100 % Natural (2)
- No GMO (1)
- Only natural ingredients (1)

### Nutrition information:

- Missing information in front of packaging (energy in KJ is missing) (3)
- Nutrition table:
  - Mandatory sugars are missing (2)
  - Sugar conc. different from the conc. measured (2)

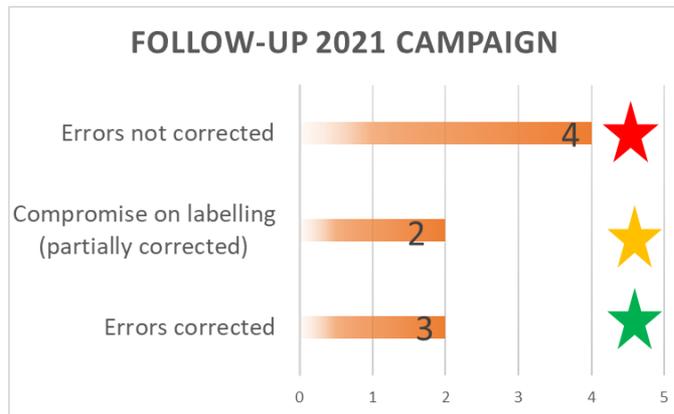
### List of ingredients:

- Name of fruit instead of the legal name: fruit juice (5)
- Wrong format: missing “Ingredients” preceding the ingredient names. e .g. “Coconut water”.

### Product name:

- Missing “partially from conc.” when it is a mixture of from conc. and direct juice. (1)
- Wrong category name: Fruit and vegetable coldpressed juice, when they use curcuma and cayenne extracts → drink instead of juice (2)

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## Corrective actions

Company	Informati ve letters	Letters of request	Answers from companies	Cases informed to the Control Authority
SEAZN	5	14	19	
No SEAZN	0	19	16	

## More steps in 2022

- **General Subdirectorate of Laboratories and Quality Control (Ministry of Agriculture, Fisheries and Food):**
  - Follow-up of samples of the 2021 campaign, that SEAZN informed the Authorities.
  - Presentation of the report prepared on the presence of sulfur dioxide in organic grape juice
- **Service of Industries and Agri-Food Promotion of the Department of Agriculture of Murcia:**
  - Follow – up of the Joint Official Control Campaign of three different departments: Agriculture, Consumption and Organic agriculture control authority of the Autonomous Community of Murcia.

# 2022 CAMPAIGN

	Pomegranate	Tomato	
EICS	SEAZN <sup>1</sup>	2	2
	BSDA <sup>1</sup>	3	2
	QualiJus <sup>1</sup>	6	5
	SGF/IQCS <sup>1</sup>	10	10
No scheme	Belgium*	2	2
	Poland*	2	0
	Denmark*	0	2
		25	23

Parameter	Method	Pomegranate		Tomato	
		FC	IFC	FC	IFC
Relative density 20/20	IFU 5 or oscillating u-tube	✓	✓	✓	✓
Brix (from density, table)	IFU 8	✓	✓	✓	✓
Total soluble solids (from density)	IFU 8	✓	✓	✓	✓
Glucose (enzym., IFU 55)	enzymatic	✓	✓	✓	✓
Fructose (enzym., IFU 55)	enzymatic	✓	✓	✓	✓
Sucrose	IC	✓	✓	✓	✓
Tot. acid Juice (pH 8,1)	IFU 3	✓	✓	✓	✓
L-malic acid	enzymatic	✓	✓	✓	✓
Tartaric acid (HPLC/IC)	IFU 65	✓	✓	✓	✓
Citric acid	enzymatic	✓	✓	✓	✓
D-isocitric acid	enzymatic	✓	✓	✓	✓
L-ascorbic acid	IFU 17 or IFU 17a	✓	✓	✓	✓
Sodium (AAS/ICP)	AAS	✓	✓	✓	✓
Potassium (AAS/ICP)	AAS	✓	✓	✓	✓
Calcium (AAS/ICP)	AAS	✓	✓	✓	✓
Magnesium (AAS/ICP)	AAS	✓	✓	✓	✓
Nitrate	IFU 48	✓	✓	✓	✓
Total phosphorus (AAS/ICP)	IFU 50	✓	✓	✓	✓
Sorbitol (HPLC/IC)	IC	✓	✓	✓	✓
Formol number	IFU 30	✓	✓	✓	✓
Anthocyanins fingerprint	HPLC	✓	✓	✓	✓
Oxalic acid (HPLC/IC)	IC	✓	✓	✓	✓
Mannitol (IC)	IC	✓	✓	✓	✓
Artificial colourings (TLC)	TLC (or equiv.)	✓	✓	✓	✓
Heavy metals (Hg, Cd, Pb, Fe, Cu, Zn, Sn) + As	IC or AAS	✓	✓	✓	✓
SGF-Profiling*		✓	✓	✓	✓
Ergosterol	HPLC	✓	✓	✓	✓
delta 18O - Water of raw product	IRMS	✓	✓	✓	✓
Pesticide screening	DIN EN 15662:2018-07 QuiCHERS	✓	✓	✓	✓

Internal (calculated) relations  
ratio, total sugar, sugar-free extract, glucose/fructose ratio, % sucrose of total sugar, citric acid/isocitric acid ratio, phosphate

Product	Evaluation	Remarks
Tomato juice (direct)	fail	Greatly elevated content of sucrose, low content of potassium, phosphorous and formol number, and a low value of d18O hints highly to <b>sugar addition</b> . Claim "not salted" is questionable, given that the CoP allows max 100 mg/l in unsalted products and the sample shows high salt.
		
Tomato juice (from concentrate)	pass	
Pomegranate juice (direct)	fail	addition/carry-over of foreign fruit (atypical, black carrot, aging/heating peaks <b>anthocyanin peaks</b> ), L-malic acid on higher level
		
Pomegranate juice (direct)	fail	addition of exogenous water suspected ( <b>delta O18</b> ), 5-HMF > 20 mg/L



# ¡GRACIAS!



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